

CHAPTER ONE

MANUAL ORGANIZATION

Table 1 contains model designation information.

Table 1 MODEL, YEAR AND FRAME NUMBER

Model and year	Engine serial No.	Frame serial No.
ATC70 1985*	TB03E-3000001-on	TB030-FK000001-on
ATC110 1985*	TB02E-2700001-on	TB020-FC600001-on
ATC125M 1985**	TE01E-2100001-on	TE010-FC100001-on
Fourtrax 70		
1986	TE10E-2000001-on	TE100-GC000001-on
	TE10E-2046642	TE100-GC045787
1987	TE10E-2100001-on	TE100-HC000001-on
TRX125 1985*	TE05E-2000034-on	TE050-FC000005-on
Fourtrax 125 1986**	TE05E-2100001-on	TE050-GC100001-on
* Last year of production.		
** Last year covered in this book.		

CHAPTER TWO

TROUBLESHOOTING

EMERGENCY TROUBLESHOOTING

If the engine will not start, follow the procedures in Chapter Two in the main body of this book. On models equipped with an ignition switch, make sure the ignition switch is in the ON position.

CHAPTER THREE

LUBRICATION, MAINTENANCE AND TUNE-UP

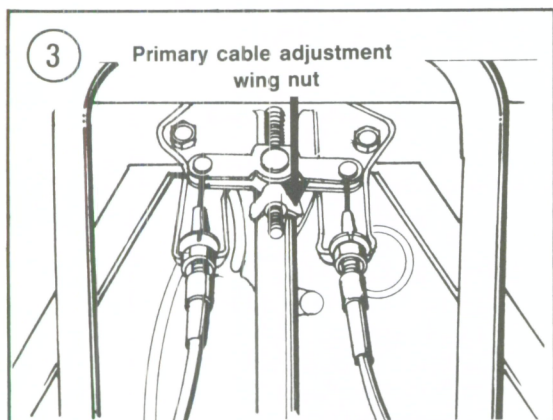
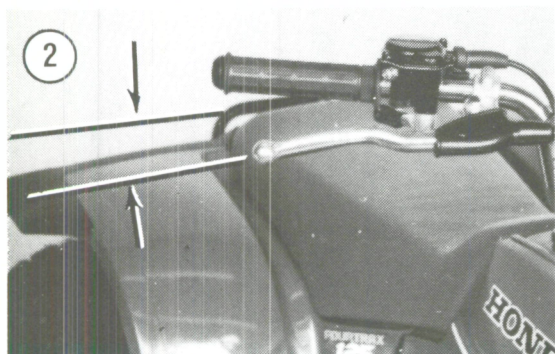
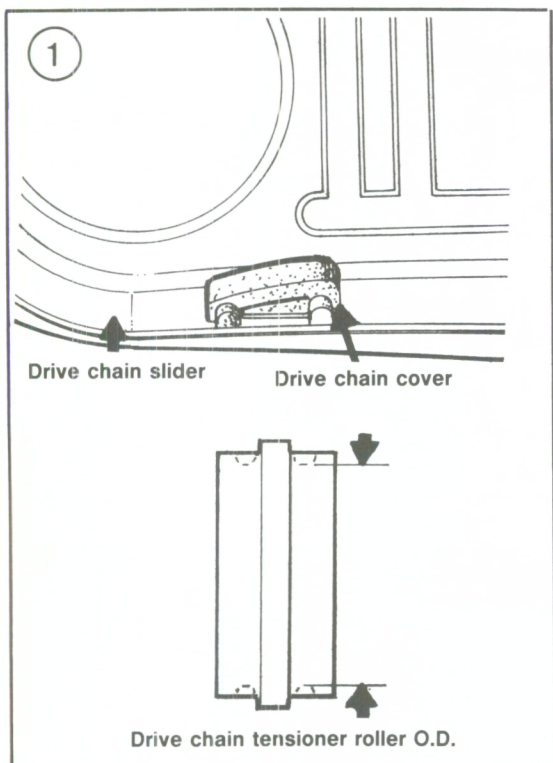
SERVICE INTERVALS

The service intervals indicated in Table 2 are recommended by the factory. Strict adherence to these recommendations will ensure long service from your Honda ATV. However, if the vehicle is run in an area of high humidity, the lubrication and services must be done more frequently to prevent possible rust damage. This is especially true if you have run the ATV through water (especially salt water).

TIRES AND WHEELS

Tire Pressure (4-Wheel Models)

The tire pressure service procedure is the same as on 3-wheel models with the exception of tire size and the recommended tire inflation pressure. Refer to Table 3 for tire size, recommended tire inflation pressure and tire circumference.



PERIODIC LUBRICATION

Drive Chain

The drive chain on the TRX125 and Fourtrax 125 is an O-ring type chain. Lubricate the drive chain as described under *Drive Chain Lubrication, With O-rings* in Chapter Three in the main body of this book.

PERIODIC MAINTENANCE

Drive Chain Adjustment (TRX125 and Fourtrax 125)

The drive chain adjustment is the same as on 1984 ATC125M models, described in Chapter Three in the main body of this book, with the exception of the tightening torque for the rear axle bearing holder bolts. Tighten these bolts to 70-80 N•m (51-58 ft.-lb.).

Drive Chain Slider (Fourtrax 70)

1. Remove the drive chain cover as described under *Drive Chain Removal/Installation* in Chapter Eight in the main body of this book.
2. Inspect the chain slider and roller (**Figure 1**) for wear or damage.
3. Measure the outside diameter of the roller. If worn to 37.0 mm (1.46 in.) or less, replace the roller.
4. There are no wear limit specifications on the chain slider. If a groove is worn half way through the slider, replace the slider.
5. Install the drive chain cover as described under *Drive Chain Removal/Installation* in Chapter Eight in the main body of this book.

Front Brake Adjustment

The front brake lever should be checked at the interval indicated in **Table 2** and adjusted if necessary to maintain the proper amount of free play. The brake lever should travel about 15-20 mm (5/8-3/4 in.) (**Figure 2**) before the brake shoes come in contact with the brake drums, but must not be adjusted so closely that the brake shoes contact the brake drums with the lever relaxed.

Fourtrax 70

If adjustment is necessary, perform the following.

1. Place the ATV on level ground and set the parking brake.
2. Turn the primary cable adjustment wing nut (**Figure 3**) until the correct amount of free play is achieved.

NOTE

Make sure the cut-out relief in the adjustment wing nut is properly seated on the brake arm pivot pin.

3. Jack up the front of the vehicle with a small hydraulic jack or place wood blocks under the frame and lift the front wheels off the ground.

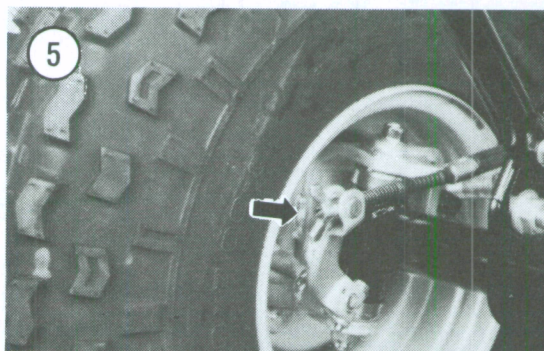
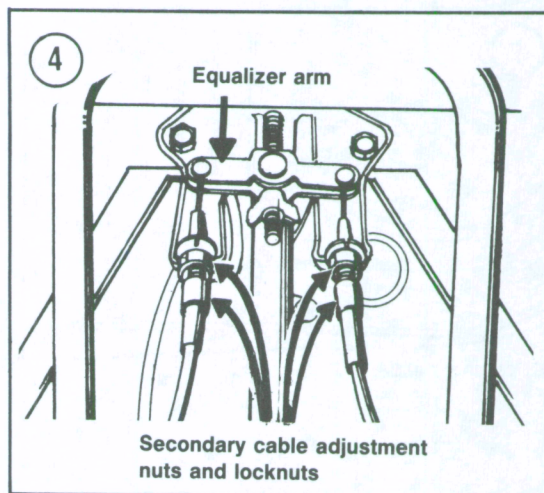
4. Spin both front wheels at the same speed and apply the front brake lightly. Make sure both wheels slow down and stop at the same time. If braking action is uneven, loosen the locknuts and turn the secondary cable adjustment nuts (**Figure 4**) on either or both cables as required to equalize the braking action.

5. Re-spin both front wheels at the same speed and apply the front brake lightly. Make sure both wheels slow down and stop at the same time. If braking action is uneven, repeat Step 4 until braking action is equal.

6. If the equalizer arm (**Figure 4**) is inclined to one side after equal braking action is achieved, inspect the brake cable, the brake shoes and drum on that side for excessive wear as described in this supplement.

7. Tighten the secondary brake cable locknuts and repeat Step 2.

8. Remove the wood blocks or jack from under the vehicle.

**TRX125 and Fourtrax 125**

If adjustment is necessary, perform the following.

1. Place the ATV on level ground and set the parking brake.

2. Turn the adjustment wing nut (**Figure 5**) on both the right- and left-hand brake arms an equal number of turns alternately until the correct amount of free play is achieved.

NOTE

Make sure the cut-out relief in each adjustment wing nut is properly seated on the brake arm pivot pin.

3. Jack up the front of the vehicle with a small hydraulic jack or place wood blocks under the frame and lift the front wheels off the ground.

4. Spin both front wheels at the same speed and apply the front brake lightly. Make sure both wheels slow down and stop at the same time. If braking action is uneven, loosen or tighten one or both of the adjustment wing nuts as required to equalize the braking action.

5. Re-spin both front wheels at the same speed and apply the front brake lightly. Make sure both wheels slow down and stop at the same time. If

braking action is uneven, repeat Step 4 until braking action is equal.

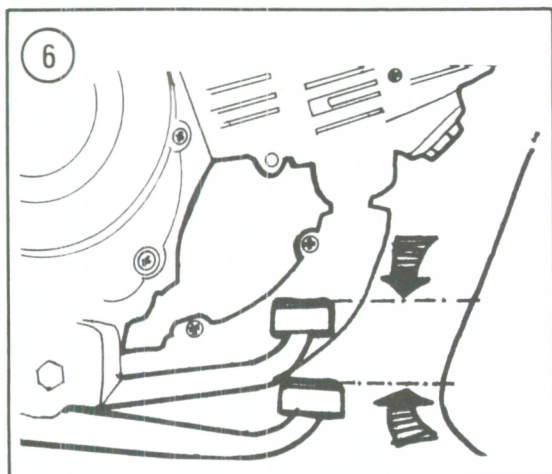
6. If either brake arm at the front wheel brake panel does *not* have any free play, after the brake lever free play is achieved, the individual brake cables within the cable's front junction box must be adjusted. Refer to *Front Brake Cable Replacement, TRX125 and Fourtrax 125* in this supplement.

7. Remove the wood blocks or jack from under the vehicle.

Rear Brake Pedal and Lever Adjustment (1987 Fourtrax 70)

A foot operated rear brake pedal has been added to activate the rear brake as well as the brake lever on the handlebar.

The rear brake pedal and lever should be inspected every 30 days of operation and adjusted, if necessary, to maintain the proper amount of free play. The brake lever should travel the specified amount of travel before the brake shoes come in contact with the brake drum, but should not be



adjusted so closely that the brake shoes contact the brake drum with the pedal relaxed.

1. Set the ATV on level ground and block the wheels so the vehicle will not roll in either direction.
2. Depress the brake pedal until the brake shoes come in contact with the brake drum. The correct amount of free play is 15-20 mm (5/8-3/4 in.) as shown in **Figure 6**.
3. If adjustment is necessary, turn the *lower* adjustment nut (A, **Figure 7**) on the end of the rear brake cable in or out to achieve the correct amount of free play.

NOTE

Make sure the cut-out relief in the adjustment nut is properly seated on the brake arm pivot pin.

4. The rear brake lever free play must be adjusted after the rear brake pedal has been adjusted. Adjust the rear brake lever as follows:

- a. Pull on the brake lever until the brake shoes come in contact with the brake drum. The correct amount of free play is 15-20 mm (5/8-3/4 in.).
- b. If adjustment is necessary, turn the *upper* adjustment nut (B, **Figure 7**) on the end of the rear brake cable in or out to achieve the correct amount of free play.

NOTE

Make sure the cut-out relief in the adjustment nut is properly seated on the brake arm pivot pin.

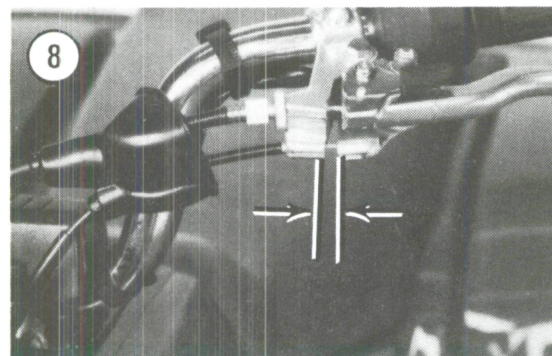
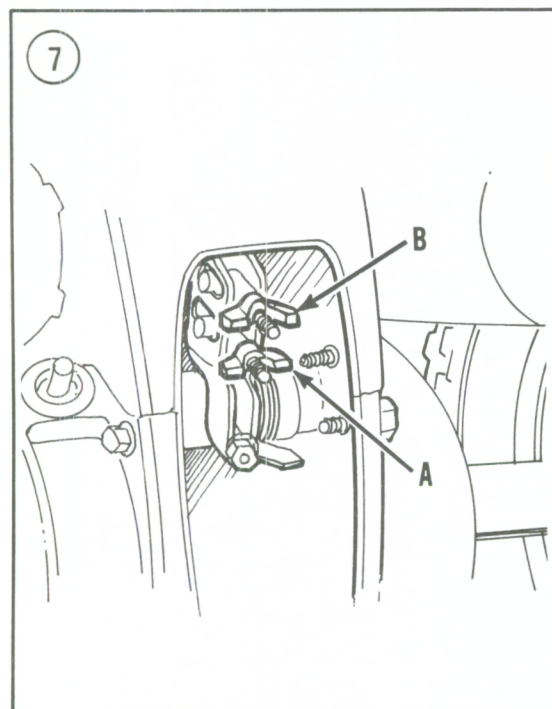
Clutch Adjustment (Fourtrax 70)

The clutch adjustment should be checked at the interval indicated in **Table 2**. The adjustment procedure is the same as described in Chapter Three in the main body of this book with the exception of the torque value for the Fourtrax 70. After clutch adjustment is completed, tighten the locknut to 8-12 N·m (6-9 ft.-lb.).

No torque specifications are given by Honda for any other models.

Reverse Gear Selection Cable Adjustment (TRX125 and Fourtrax 125)

The reverse gear selector cable lever should be inspected at the interval indicated in **Table 2** and adjusted if necessary to maintain the proper amount of free play. The reverse gear selector cable lever (**Figure 8**) should have about 2-4 mm



(1/16-1/8 in.) of free play at the lever end of the cable.

If adjustment is necessary, perform the following.

1. Place the ATV on level ground and set the parking brake.
2. Remove the rear fender as described in this supplement.
3. Loosen the locknut (A, **Figure 9**) and turn the adjustment nut (B, **Figure 9**) until the correct amount of free play is achieved.
4. Tighten the cable locknut securely and install the rear fender.

Front Wheel Toe-in Inspection and Adjustment (4-Wheel Models)

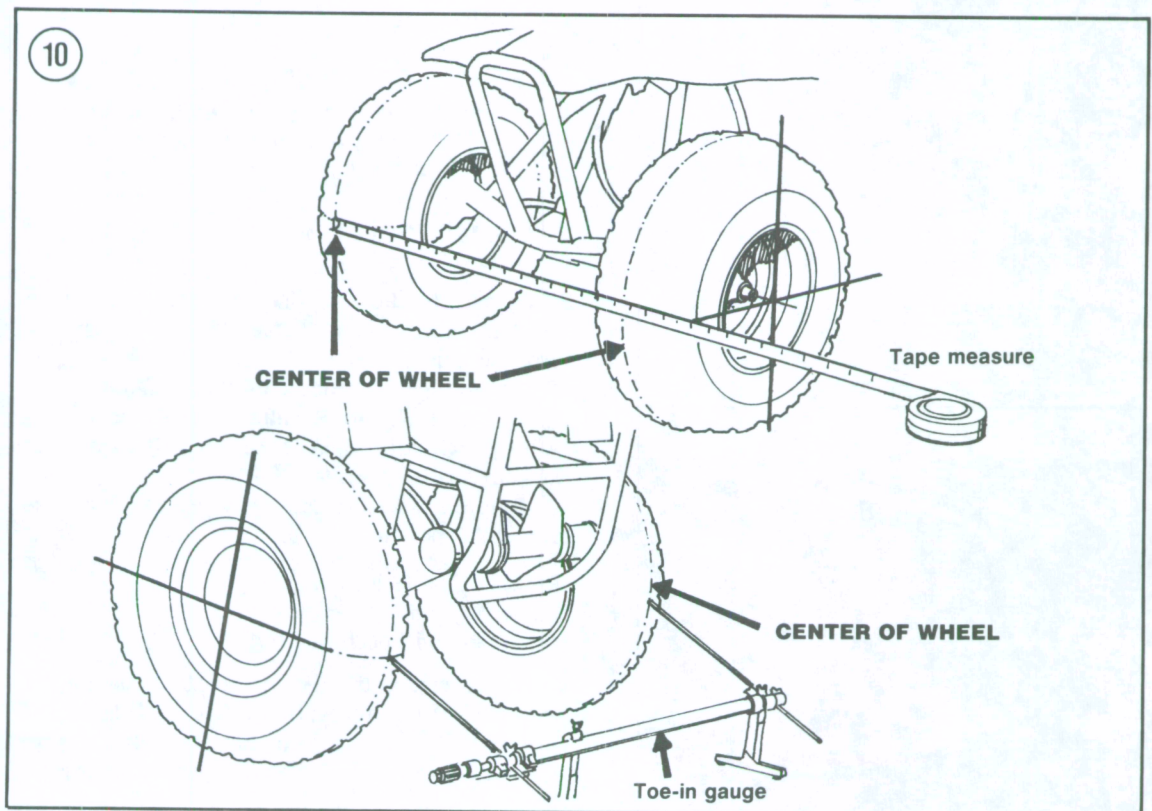
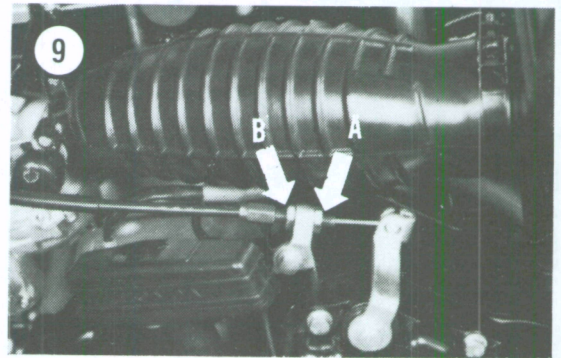
The front wheel toe-in alignment should be checked at the interval indicated in **Table 2**.

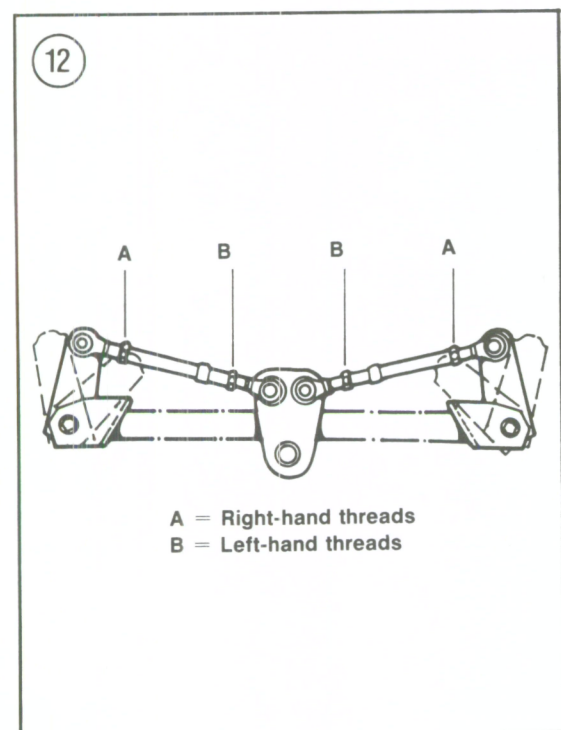
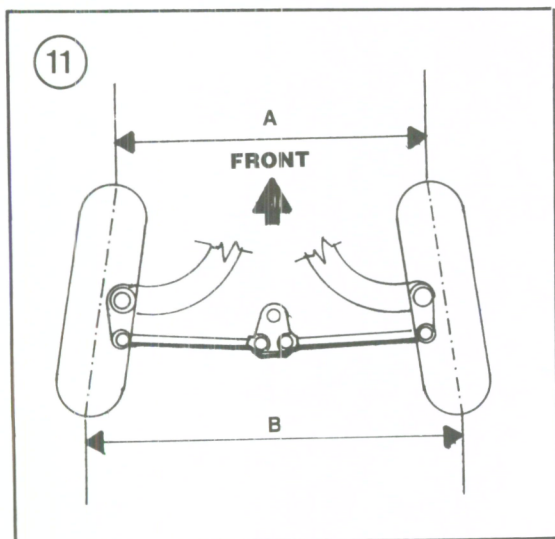
1. Inflate the front tires to the recommended tire pressure; refer to **Table 3**.
2. Place the ATV on level ground and set the parking brake. Block the rear wheels so the vehicle will not roll in either direction.
3. Place wood block(s) under the frame so the front wheels are off the ground.

4. Turn the handlebar so the wheels are at the straight ahead position.

5. Use a tape measure and measure or hold a scribe (**Figure 10**), white crayon or white tire marker against the center of the front tire and spin the wheel slowly. Make sure the line is visible at both the front and rear of the tire. Repeat for the other tire.

6. Carefully measure the distance between the center line of both front tires at the front and rear as shown in **Figure 11**. The difference between the front dimension "A" and the rear dimension "B" is listed in **Table 4**. This amount of toe-in is





necessary for proper steering. Too much toe-in can cause excessive tire wear and hard steering. Too little toe-in will allow the front end to wander.

7. If the toe-in is incorrect, perform the following:

- Loosen the locknuts securing each tie rod end (Figure 12). The inside locknuts (Figure 13) have *left-hand threads*.
- Use a wrench on the flat (Figure 14) on the tie rod and slowly rotate one or both tie rods until the dimensions are correct. Recheck each measurement after each adjustment. Turn the tie rods only a small amount each time. It takes very little adjustment of the tie rod to move each tire a large amount.
- When the adjustments are correct, hold each tie rod in place and tighten the locknuts securing each tie rod end to the following torque specification:

Fourtrax 70: 35-43 N•m (25-31 ft.-lb.);

TRX125 and Fourtrax 125: 25-31 N•m (18-22 ft.-lb.).

Fuel Filter Cleaning (4-Wheel Models)

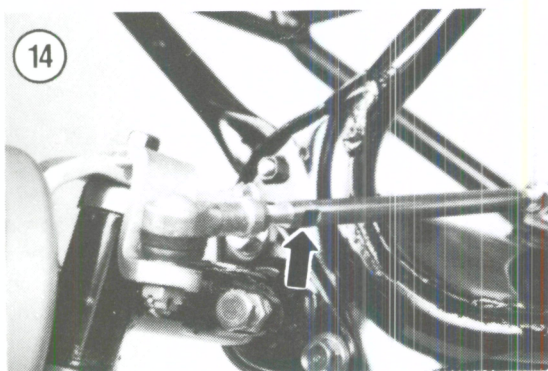
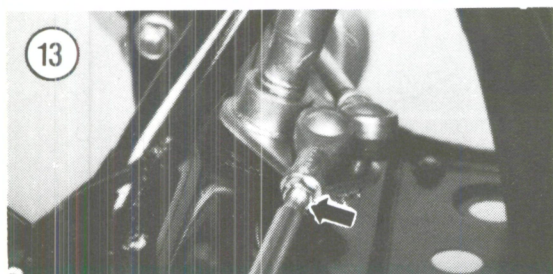
The fuel filter screen is attached to the carburetor at the base of the fuel shutoff valve and is cleaned as described under *Fuel Filter Cleaning, 1978-on ATC70; ATC110; ATC125M* in Chapter Three in the main body of this book.

Spark Arrester Cleaning

The spark arrester should be cleaned at the interval indicated in Table 2.

WARNING

To avoid burning your hands, do not perform this operation with the exhaust system hot. Work in a well ventilated area (outside your garage) that is free of any fire hazards. Be sure to protect your eyes with safety glasses or goggles.



1. Place the ATV on level ground and set the parking brake.

2A. On 70 cc models, remove the bolt (Figure 15) securing the spark arrester to the tailpipe. Slide the unit out of the tailpipe.

2B. On 110 cc models, remove the bolt (A, Figure 16) securing the spark arrester and slide the unit out of the tailpipe (B, Figure 16).

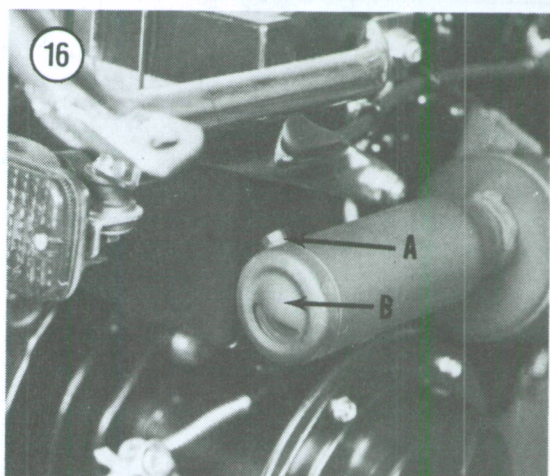
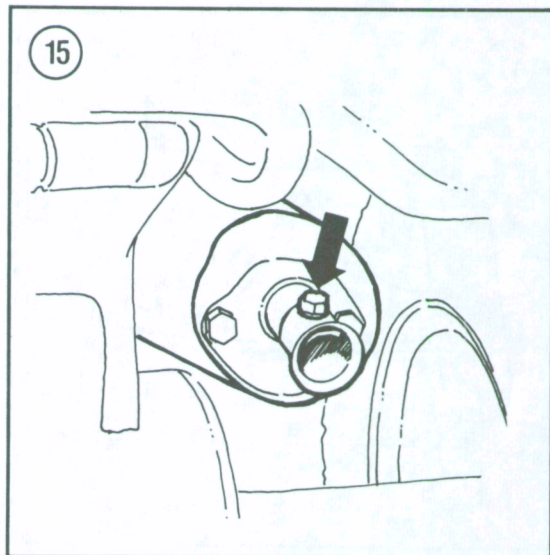
2C. On 125 cc models, remove the bolt (Figure 17) and sealing washer at the base of the spark arrester. The spark arrester does not come out of the tailpipe on this model.

3A. On 70 cc and 110 cc models, perform the following:

- Clean off accumulated carbon from the spark arrester with a scraper and wash off with solvent. Thoroughly dry with compressed air.
- Start the engine and rev it up a couple of times to blow out accumulated carbon from the tail section of the muffler. Continue until the carbon stops coming out.
- Turn the engine off and let the exhaust system cool down.
- Install the spark arrester and install the bolt. Tighten the bolt securely.

3B. On 125 cc models, perform the following:

- Start the engine and rev it up a couple of times to blow out accumulated carbon from the opening at the base of the muffler. Continue until the carbon stops coming out.
- Turn the engine off and let the exhaust system cool down.
- Inspect the sealing washer on the bolt. Replace if necessary.
- Install the bolt and sealing washer. Tighten to 30-40 N•m (22-29 ft.-lb.)



ENGINE TUNE-UP

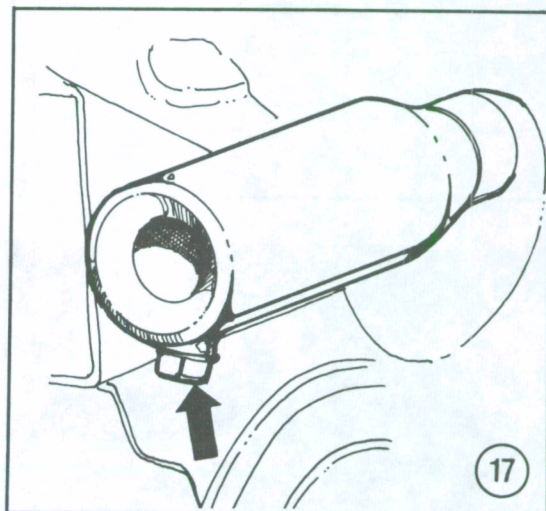
A tune-up is general adjustment and maintenance to ensure peak engine performance. A complete tune-up should be performed every 30 operating days with normal riding. More frequent tune-ups may be required if the ATV is ridden hard or raced.

Table 5 summarizes tune-up specifications.

VALVE CLEARANCE ADJUSTMENT

Fourtrax 70

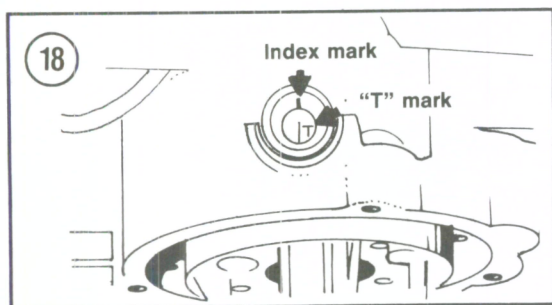
Valve clearance adjustment is the same as on ATC70 models with the exception of the location of the timing mark on the alternator rotor. Remove the timing inspection cap on the left-hand crankcase cover in order to see the timing mark (Figure 18).



TRX125 and Fourtrax 125

Valve clearance adjustment is the same as on ATC125M models except that the skid plate must be removed to gain access to the exhaust valve adjustment cover.

Remove the bolts securing the skid plate and remove the skid plate.

**SOLID STATE IGNITION****(Fourtrax 70)**

The Fourtrax 70 is equipped with a solid state ignition system. Follow the procedure for the 1981-on ATC110 as described in Chapter Three in the main body of this book with the exception of the idle speed. The correct idle speed is 1,700 \pm 100 rpm.

CAMSHAFT CHAIN TENSIONER ADJUSTMENT

The cam chain tensioner on all models since 1985 is automatic and requires no routine adjustment. There are no provisions for adjusting the tensioner mechanism.

Table 2 MAINTENANCE SCHEDULE***Every 30 days of operation**

- Change engine oil
- Clean oil filter and filter rotor
- Clean and oil air filter element
(perform sooner if used in wet or dusty terrain)
- Inspect spark plug, regap if necessary
- Inspect valve clearance, adjust if necessary
- Check and adjust the carburetor
- Check ignition timing (CDI ignition)
- Check and adjust ignition timing
(contact breaker point ignition)
- Inspect fuel lines for chafed, cracked or swollen ends, replace if necessary
- Clean fuel strainer, replace if necessary
- Check throttle operation, adjust if necessary
- Clean spark arrester
- Lubricate drive chain
- Inspect drive chain slider (models so equipped)
- Adjust drive chain tension
- Check and adjust clutch free play
- Check and adjust reverse gear selector lever free play (models so equipped)
- Check and adjust brake(s)
- Check brake lining wear indicator(s)
- Check and adjust rear brake pedal height and free play
- Lubricate rear brake pedal and shift lever
- Check tire and wheel condition
- Check and adjust front wheel toe-in (4-wheel models)
- Inspect front steering for looseness
- Check wheel bearings for smooth operation
- Check engine mounting bolts for tightness

* This Honda factory maintenance schedule should be considered as a guide to general maintenance and lubrication intervals. Harder than normal use (racing) and exposure to mud, water, sand, high humidity, etc. will naturally dictate more frequent attention to most maintenance items.

**Table 3 TIRE INFLATION PRESSURE
AND CIRCUMFERENCE MEASUREMENTS (4-WHEEL MODELS)**

Model	Tire size	Tire pressure		Circumference	
		kg/cm ²	psi	mm	in.
Fourtrax 70 Front and rear	16×8.00-7	0.15	2.2	1,285	50.6
TRX125 and Fourtrax 125	20×7.0-8	0.2	2.9	1,585	62.4
	22×11.0-8	0.15	2.2	1,742	68.2

Table 4 FRONT SUSPENSION TOE-IN DIMENSION

Fourtrax 70	0 ± 7.5 mm (0 ± 0.30 in.)
TRX125 and Fourtrax	5 ± 10 mm (0.2 ± 0.4 in.)

Table 5 TUNE-UP SPECIFICATIONS

Valve clearance (intake and exhaust)	
Fourtrax 70	0.05 mm (0.002 in.)
TRX125 and Fourtrax 125	0.07 mm (0.003 in.)
Compression pressure (at sea level)	
Fourtrax 70	10.5-13.5 kg/cm ² (149-191 psi)
TRX125 and Fourtrax 125	11.0-14.0 kg/cm ² (156.5-199 psi)
Spark plug type	
Fourtrax 70	NGK CR7HS, ND U22FSR-L
TRX125 and Fourtrax 125	NGK DR8ES-L, ND X24ESR-U
Spark plug gap	0.6-0.7 mm (0.024-0.028 in.)
Ignition timing at idle	Timing mark "F"
Idle speed	1,700 ± 100 rpm

CHAPTER FOUR

ENGINE

ENGINE

Removal/Installation (1987 Fourtrax 70)

The engine removal and installation procedures are the same as on previous years with the exception of the added rear brake pedal assembly.

Remove the rear brake pedal assembly as described in this supplement.

Removal/Installation (All Other 4-Wheel Models)

The engine removal and installation procedures are the same as on late model ATC70s and ATC125Ms as described in Chapter Four in the

main body of this book with the following exceptions:

1. Remove the front fender and fuel tank as described in this supplement.
2. Remove the seat/rear fender as described in this supplement.
3. On TRX125 and Fourtrax 125 models, perform the following:
 - a. Remove the bolts (Figure 19) securing the inner fenders and remove both inner fenders.
 - b. Remove the bolts (Figure 20) securing the engine mounting front pipe and remove the front pipe.
4. During installation, tighten the engine mounting bolts to the torque specifications listed in Table 6.

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